



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **WATANABE, Takayuki et al.**

Group Art Unit: **2822**

Serial No.: **10/073,877**

Examiner: **M. F. GUERRERO**

Filed: **February 14, 2002**

P.T.O. Confirmation No.: 6745

For: **PROCESS OF MANUFACTURING A SEMICONDUCTOR DEVICE**

**REQUEST FOR RECONSIDERATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

January 11, 2005

Sir:

In response to the Office Action dated **November 2, 2004**, Applicants respectfully request reconsideration of the prior art rejections of claims 2, 17, 19 and 20-22, as discussed below.

- ① Claims 2 and 20-22 stand rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,242,857 to Cooper et al. (hereinafter "**Cooper et al.**") in view of **Adachi et al.** (previously applied).

Applicants respectfully request reconsideration of this rejection.

**Cooper et al.** discloses a semiconductor buried heterostructure laser having a mesa (2, 3, 4) and confinement layers (5, 6, 7) on a substrate (12). At least the lowermost of the confinement layers (5, 6, 7) is substantially planar up to the mesa. This is achieved by MOVPE growth of InP against lateral surfaces of the mesa (2, 3, 4) which are defined by distinct crystallographic planes of the material of the mesa. In particular (111) B InP planes are used.

In Fig. 3e, the stacked structure includes an InP layer 2, a GaInAsP layer 3 and an InP